

WHAT IS CLAIMED IS:

1. A magnetic material for magnetic refrigeration, which exhibits, in a certain temperature region, an inflection point at which a second order differential coefficient of a magnetization curve changes from positive to negative with respect to a magnetic field, within the range of the strength of the magnetic field formed using a permanent magnet.

2. A material according to claim 1, which exhibits, only in part of a temperature region from 200 K to 350 K, an inflection point at which a second order differential coefficient of a magnetization curve changes from positive to negative with respect to a magnetic field, within the range of the strength of the magnetic field of not more than 1 tesla.

3. A material according to claim 1, which comprises:

a total of 50 to 96 atomic % of one or not less than two elements selected from the group consisting of Fe, Co, Ni, Mn, and Cr;

a total of 4 to 43 atomic % of one or not less than two elements selected from the group consisting of Si, C, Ge, Al, B, Ga, and In; and

a total of 4 to 20 atomic % of one or not less than two elements selected from the group consisting of Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, and Yb.

4. A material according to claim 3, wherein said magnetic material further comprises 4 to 25 atomic % of Si.

5. A material according to claim 1, which comprises:

a total of 60 to 96 atomic % of one or not less than two elements selected from the group consisting of Fe, Co, Ni, Mn, and Cr; and

a total of 4 to 40 atomic % of one or not less than two elements selected from the group consisting of Sc, Ti, Y, Zr, Nb, Mo, Hf, Ta, and W.

6. A material according to claim 5, wherein said magnetic material further comprises a total of not less than 25 atomic % of one or not less than two elements selected from the group consisting of Ti, Zr, Nb, and Hf.

7. A material according to claim 1, which comprises:

a total of 50 to 80 atomic % of one or not less than two elements selected from the group consisting of Fe, Co, Ni, Mn, and Cr;

a total of 20 to 50 atomic % of one or not less than two elements selected from the group consisting of Sb, Bi, P, and As.

8. A material according to any one of claims 3 to 7, wherein the content of oxygen is not more than 1 atomic %.